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Panel Title: From Process to Product: Your risk process at work

Abstract Title: Visual Impairment/Intracranial Pressure Risk Assessment

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Since 2006 there have been 6 reported cases of altered visual acuity and intracranial pressure (ICP) in long duration astronauts. In order to document this risk and develop an integrated approach to its mitigation, the NASA Space Life Sciences Directorate (SLSD) and Human Research Program (HRP) have chosen to use the Human System Risk Board (HSRB) and the risk management analysis tool (RMAT). The HSRB is the venue in which the stakeholders and customers discuss and vet the evidence and the RMAT is the tool that facilitates documentation and comparison of the evidence across mission profiles as well as identification of risk factors, and documentation of mitigation strategies. This process allows for information to be brought forward and dispositioned so that it may be properly incorporated into the RMAT and contribute to the design of the research and mitigation plans. The evidence thus far has resulted in the identification of a visual impairment/intracranial pressure (VIIP) project team, updating of both short and long duration medical requirements designed to assess visual acuity, and a research plan to characterize this issue further. In order to understand this issue more completely, a plan to develop an Accelerated Research Collaboration (ARC) has been approved by the HSRB. The ARC is a novel research model pioneered by the Myelin Repair Foundation. It is a patient centered research model that brings together researchers and clinicians, under the guidance of a scientific advisory panel, to collaborate and produce results much quickly than accomplished through traditional research models. The data and evidence from the updated medical requirements and the VIIP ARC will be reviewed at the HSRB on a regular basis. Each review package presented to the HSRB will include an assessment and recommendation with respect to continuation of research, countermeasure development, occupational surveillance modalities, selection criteria, etc. This process will determine the course of the VIIP project and ultimately how SLSD and HRP mitigate this emerging human health and performance risk.